STOWE
AUSTRALIA
SINCE 1910

HIGH VOLTAGE SERVICES
CAPABILITY STATEMENT 2018

LET'S GET CONNECTED.

PIONEERING THE ELECTRICAL INDUSTRY FOR OVER 100 YEARS, WE ARE THE PEOPLE THAT SOME OF THE WORLD'S LARGEST COMPANIES RELY ON TO DELIVER THEIR HIGH VOLTAGE SERVICES.

Our in-house team of experts are the one-stop-shop to engineer, build and maintain your high voltage network over its workable lifecycle.

MORE THAN JUST AN ELECTRICAL AND COMMUNICATIONS CONTRACTOR, WE ARE A FAMILY-OWNED COMPANY WITH AN EXTENSIVE HISTORY OF SUPERIOR SERVICE.

We are committed to adding value to the everyday operations of our clients and the wider community, and to creating a safe and rewarding environment for our people.

Who we are

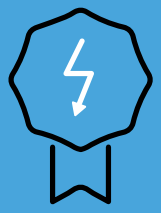
With a history of electricity generation that dates back to the 1890s, today Stowe Australia is Australia's leading family-owned electrical contractor. We employ more than 1500 full-time staff in over 13 office locations, and our annual turnover is approximately half-a-billion dollars.

We operate in diverse market sectors and take a holistic approach to delivering whole-of-life services to our clients.

OUR CORE VALUES UNDERPIN EVERYTHING WE DO AS WE AIM TO:

01 

Achieve our mission of ZERO HARM to people and the environment.

02 

Build and maintain a satisfied customer base through fair dealings based on trust and respect, and always offer a quality service.

03 

Nurture our long-term relationships with our suppliers and, most importantly, our employees.

04 

Pioneer the electrical and communications sector through safe work initiatives, innovation and diversity in our service offering.

With a commitment to excellence that spans more than a century, we have helped our clients to excel. Add to that our sound financial history – with minimal intangible assets, significant cash reserves, no borrowings, and a policy of purchasing rather than leasing our fixed assets and plant – it's clear why Stowe Australia is the electrical and communications contractor of choice for so many.

ADDING VALUE

HIGH VOLTAGE CAPABILITY

Stowe Australia delivers complete electrical and communications skills as an integrated service.

We provide a complete range of high voltage services to clients, including:

- ENGINEERING, DESIGN AND VALUE ENGINEERING
- PROTECTION AND GRADING STUDIES
- HIGH VOLTAGE SWITCHING
- CHAMBER, PAD MOUNT AND KIOSK SUBSTATIONS
- HIGH VOLTAGE SWITCHGEAR, SWITCHBOARDS AND RING MAIN UNITS
- OVERHEAD LINE WORK
- CABLE JOINTING
- TRENCH EXCAVATION
- DIRECTIONAL DRILLING
- ROAD RESTORATIONS
- TRACTION SUBSTATIONS

2017 SNAPSHOT
OF ACHIEVEMENTS

$0

BORROWINGS

STOWE AUSTRALIA IS AUSTRALIA'S LEADING FAMILY-OWNED ELECTRICAL CONTRACTOR.

$420M

REVENUE

1,420

EMPLOYEES

$54.7M

NET ASSET POSITION

13

BRANCH NETWORK

5,434

PROJECTS COMPLETED

>$295M

WORK ON HAND

Our strengths reside in the practical and innovative solutions of our staff and their willingness to ensure projects are delivered with a client-centric focus.

Our clients are the lifeblood of our success. We understand that client satisfaction is paramount to the longevity of our company and a key indicator of our business sustainability. For this reason, past performance can be measured through repeat business, which is why we place a great emphasis on becoming a partner of choice to our clients.

A large portion of our turnover is attributable to repeat business. And in a marketplace becoming increasingly value-conscious, quality and past performance is what sets a successful brand apart.

CLIENT SECTORS

DATA CENTRE POWER SYSTEMS

PRIVATE AND PUBLIC BUILDINGS

MINING AND INDUSTRIAL

WATER AND UTILITIES

DEFENCE

PETROCHEMICAL AND GAS

RAIL AND PORTS

MANUFACTURING

GOVERNMENT

URBAN INFRASTRUCTURE

FOCUSED ON YOU

Our network of local offices reaches across NSW, Queensland, Victoria and the ACT.

Our head office is located in Sydney NSW, at Rydalmere. We also have permanent offices in Penrith, Newcastle, Wollongong, Nowra, Taree, Port Macquarie, Canberra, Melbourne, Hobart, Brisbane and on the Gold Coast.

MEET OUR MANAGEMENT TEAM

Company Executive Management

- David Madson **Executive Chairman**
- Chris Madson **Managing Director**
- Barry Hore **Chief Financial Officer/Company Secretary**
- Michael Pawelko **Chief Operating Officer**
- Scott Gandy **General Manager NSW and ACT**
- Owen Davy **General Manager QLD**
- Peter Lagos **General Manager Victoria and Tasmania**

Divisional Management

- Steve Mitchell **Sydney Construction Manager**
- Darren Galea **Sydney Client Service Manager**
- Adam Ingleton **Sydney West and Cumberland Manager**
- Rob Cincotta **Sydney CBD Manager**
- Kyll Goodsell **Northern NSW Manager**
- Danny Atkinson **Newcastle Manager**
- David Bradshaw **Southern NSW Manager**
- Mark Decker **Canberra Manager**
- Ian McKenzie **Victorian Construction Manager**
- Paul Braid **Victorian Client Service Manager**
- Anthony Sheppard **Tasmania Manager**
- Les McMahon **Gold Coast Manager**
- Ross Stubbings **Brisbane Construction Manager**
- Aaron Gregg **Brisbane Client Service Manager**

SAFETY COMES FIRST

Our comprehensive safety system is certified to Australian Standard AS/NZS 4801:2001 and complies with workplace health and safety legislation.

Our commitment to achieving an outstanding safety performance is genuine. Our management team is proactive and our workforce is engaged. Each member of the Stowe Australia team is aware of their responsibilities through company and project inductions, toolbox meetings, Safe Work Methods (SWM) and Job Safety and Environment Assessments (JSEA).

Safety audits and inspections are conducted at our workplaces, and independent third-party audits of our safety management systems occur to ensure ongoing compliance and continuous improvement.

At all times, our focus is on:

- ensuring a safe workplace for our employees
- continually striving to improve safety performance
- instilling a cultural mindset to achieve a ZERO HARM work environment.

CERTIFICATE NO: OHS20286

HIGH VOLTAGE
SAFETY

SETTING THE STANDARD IN HIGH VOLTAGE SAFETY.

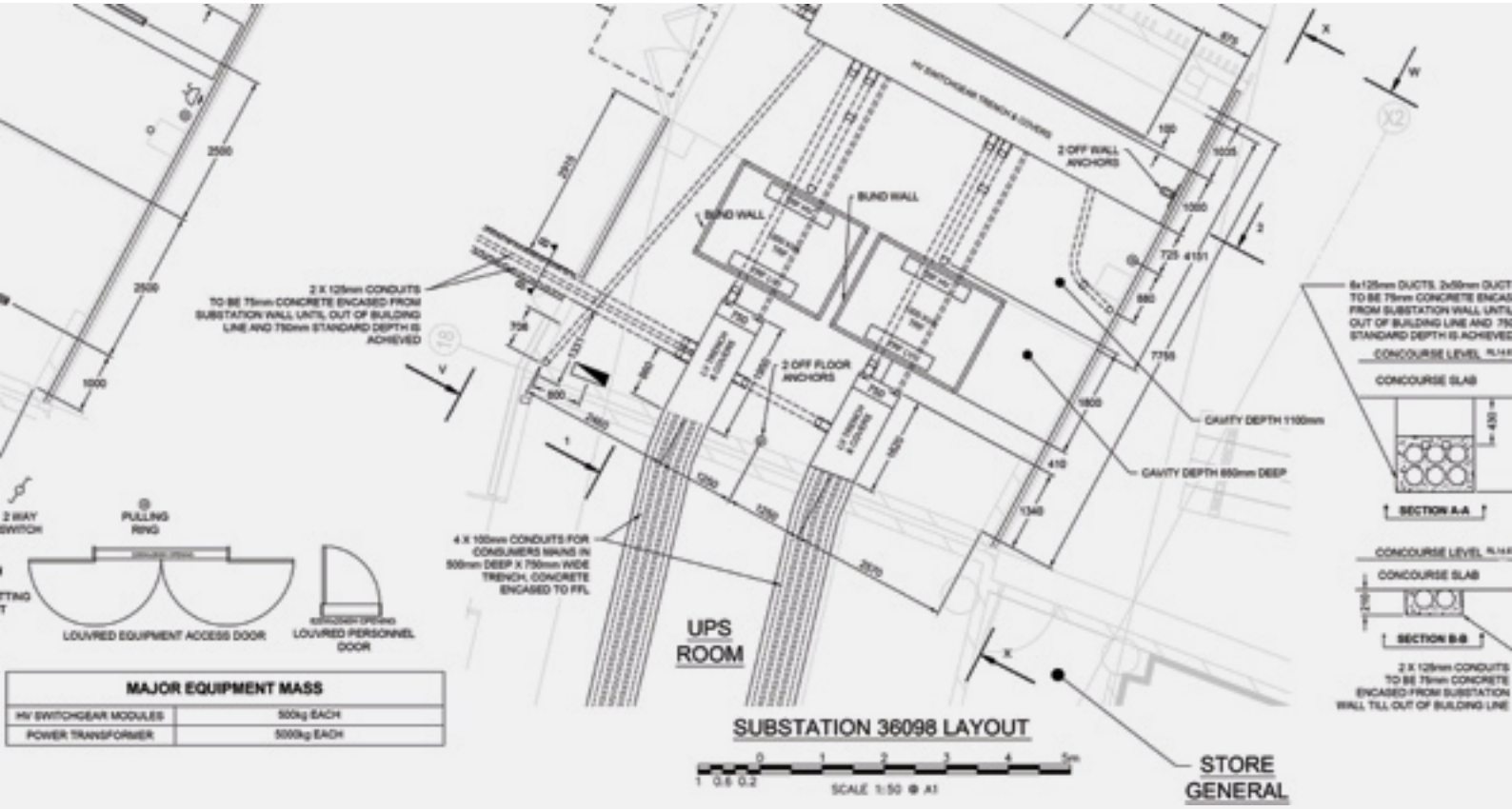
- ARC FLASH SUITS
- ARC FLASH CLOTHING
- STRINGENT PROCEDURES
- ROBUST SAFETY SYSTEMS

DESIGN AND ENGINEERING
UP TO 132KV

WITH OVER 100 YEARS OF PRACTICAL CONSTRUCTION EXPERIENCE, WE KNOW THE MANY BENEFITS THAT GOOD DESIGN CAN BRING.

Our in-house engineering team comprises industry experts with vast technical competence and experience.

DESIGN AND ENGINEERING UP TO 132KV



We are equipped to design and build projects of any size, type and scale. We know how to drive innovation and meet any challenge.

LEVEL 3 ACCREDITED SERVICE PROVIDER (ASP3)

Our team of Level 3 Design Engineers can design overhead and underground utility networks for all settings including industrial, commercial or residential sub-divisions, new buildings, retrofitting old buildings and power upgrade work.

Designs include:

- 11kV distribution feeders
- 132kV transmission feeders
- kiosk and padmount substations
- utility chamber substations
- street lighting
- direct distributors.

PRIVATE HIGH VOLTAGE NETWORK DESIGN

From shopping centres to data centres, container terminals to metal recycling yards, our team will work with all stakeholders to deliver a functional and practical network. We engage with specialist technology partners to ensure appropriate value solutions are identified and implemented. Importantly, we design from the perspective of a constructor.

HIGH VOLTAGE PROTECTION AND GRADING

The protection scheme is the brains behind the switchgear. It is engineered to save lives and prevent catastrophic failures, which means it's critical to get things right. Our Protection Engineers have the experience to do that. They design, configure and load the file settings into the relays, as well as writing the relay test instructions that are handed to our commissioning teams to test prior to energisation.

We work with all brands including:

SIEMENS · Schneider Electric · ALSTOM · G&C · ABB · SEL Schweitzer Engineering Laboratories · GE · EATON

HIGH VOLTAGE SWITCHING

Effective planning, management and utility liaison are paramount to keeping your plant and all people safe during a high voltage switching process.

01 We begin with a site visit to analyse your circuitry to determine the switching sequence required to perform an effective isolation.

02 We plan and write the switching instructions to minimise the impact to your business and provide a safe working environment.

03 Our qualified and experienced high voltage operators execute the instructions according to our Arc Flash policy, which requires our operators to wear 40-Cal rated Arc Flash suits.

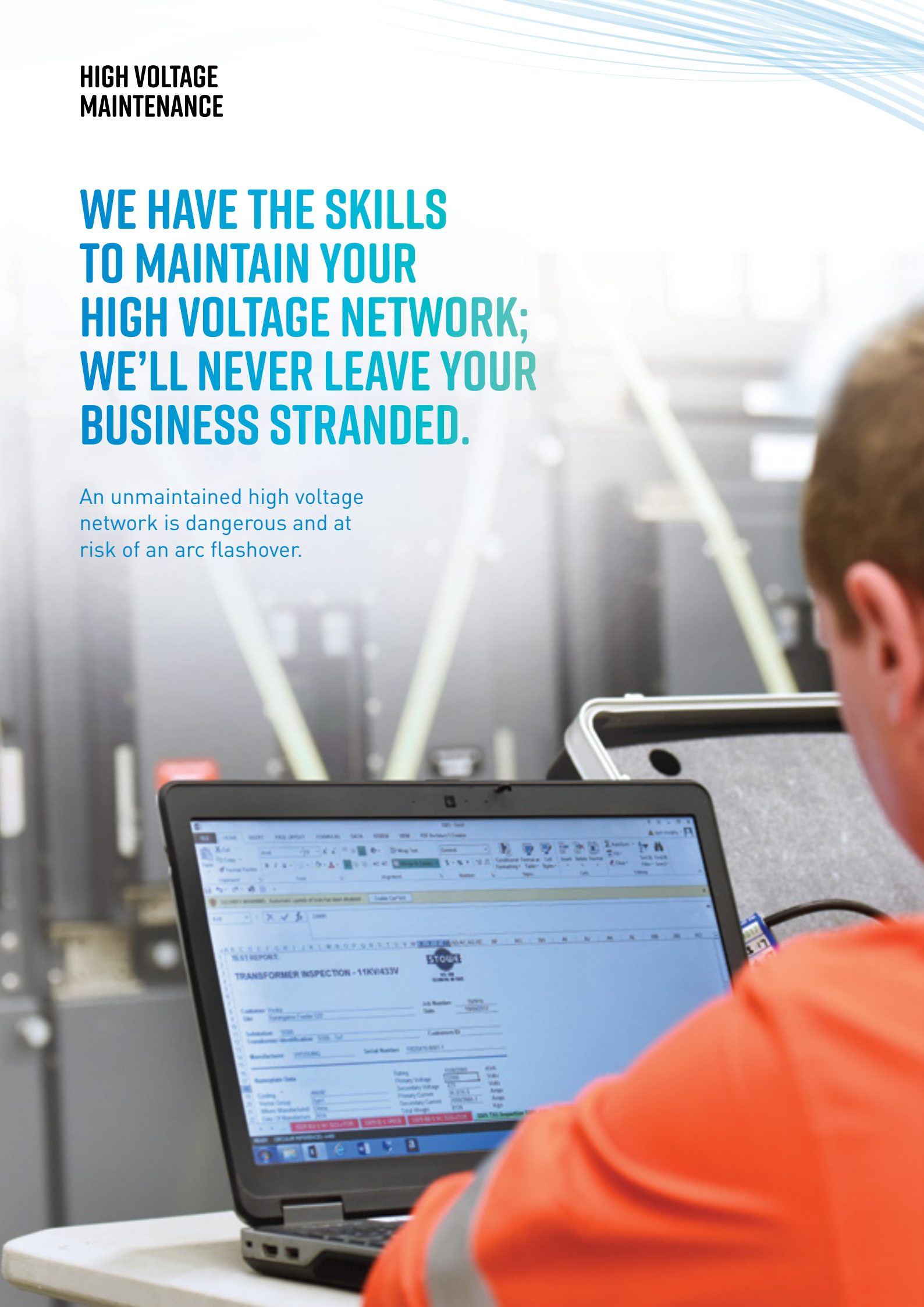
04 Once the switching process has been completed and the earth switches have been operated, we certify the area as safe and issue permits for other staff to return to work.

40 CAL RATED ARC FLASH SUITS

HIGH VOLTAGE
MAINTENANCE

WE HAVE THE SKILLS TO MAINTAIN YOUR HIGH VOLTAGE NETWORK; WE'LL NEVER LEAVE YOUR BUSINESS STRANDED.

An unmaintained high voltage network is dangerous and at risk of an arc flashover.



HIGH VOLTAGE MAINTENANCE

Arc temperatures can exceed 19,400 OC, and if the switchgear isn't maintained there is a greater risk of the arc becoming uncontrolled and melting or evaporating parts of your installation.

Preventative maintenance programs keep your system safe and reliable. They are critical to business continuity as faults are generally found and repaired before they can cause more serious failures, such as fire or explosion.

Determining the right high voltage maintenance program can be complex. Invite one of our High Voltage Account Managers to your site and we will step you through the process.

OUR MAINTENANCE PROCESS:

01 SCOPING (ONSITE)

- Client requirements
- Switchgear type
- Transformer type
- Site operating protocol
- Other constraints
- Hours of operation

02 FEE PROPOSAL PROVIDED

03 CLIENT APPROVAL

04 PLANNING

- Outage planning and notifications
- Switching planning
- Parts ordering
- Approvals
- Scheduling

05 EXECUTION

06 REPORTING AND CLOSING

HIGH VOLTAGE
TESTING

WE DON'T JUST HAVE THE RIGHT EQUIPMENT TO TEST YOUR HIGH VOLTAGE NETWORK, WE HAVE THE RIGHT PEOPLE.

You can spend millions of dollars on high voltage test equipment, but without the right people to operate it the equipment is worthless. Analysing and interpreting test results is a highly specialised field.

HIGH VOLTAGE TESTING

OUR TESTING CAPABILITIES INCLUDE:

- PRIMARY AND SECONDARY INJECTION TESTING
- VOLTAGE WITHSTAND TESTING (HIPOT)
- VERY LOW FREQUENCY (VLF) TESTING
- PARTIAL DISCHARGE
- CIRCUIT BREAKER TIMING
- DUCTOR
- TRANSFORMER CONDITION MONITORING
- OIL SAMPLING
- EARTH GRID RESISTANCE TESTING
- ULTRASONIC AND THERMOGRAPHIC
- CONDITION MONITORING OF HIGH VOLTAGE ELECTRIC MOTORS
- FREQUENCY RESPONSE ANALYSIS OF TRANSFORMERS
- TAN DELTA TESTING OF TRANSFORMER BUSHINGS
- CURRENT TRANSFORMER (CT) AND VOLTAGE TRANSFORMER (VT) TESTING
- WINDING RESISTANCE AND RATIO.

Our testing equipment is supplied by the world's leading manufacturers including:

ABB · S&C · HIGH VOLTAGE · Megger · NHP · OMICRON LAB · Schneider Electric · Vanguard Instruments Company, Inc.

LEVEL I ACCREDITED SERVICE PROVIDER (ASPI)

OUR IN-HOUSE EXPERTISE ENABLES US TO DESIGN, CONSTRUCT AND COMMISSION ELECTRICAL INFRASTRUCTURE PROJECTS OF ANY SIZE AND TYPE.

LEVEL I ACCREDITED SERVICE PROVIDER (ASPI)

CONNECTING YOUR PROJECT TO A UTILITIES NETWORK CAN BE A COMPLICATED AND DAUNTING TASK.

Most ASP1 projects require a new feeder connection, meaning that much of the work is conducted outside your building envelop and in the public domain.

Our ASP Project Managers remove the burden of connection from your project management team. In fact, we have become the trusted partner for many organisations, large and small, to build the network infrastructure their project requires.

We work independently with utilities and other stakeholders such as Roads and Maritime Services, building owners, and the general public, to effectively and efficiently deliver power to your project.

Our services include:

- padmount, kiosk and chamber-type substation installation and fit-out
- high voltage switchboards and ring main unit (RMU) installations
- transformer installation and maintenance
- installation of poles and cabling
- asset relocations
- street and area lighting
- high voltage cable jointing
- excavation for underground cabling
- all types of overhead line works
- installation of poles
- liaison, connection and commissioning to authority networks
- excavation works and road restorations.

We have delivered projects to:

- Department of Defence
- Department of Education and Training
- Department of Commerce
- builders, developers and retail clients
- end users and facility managers
- asset relocation services to utilities
- private healthcare companies and hospitals
- industrial, mining and infrastructure.

ASPI PROJECTS

PRIVATE HIGH
VOLTAGE NETWORKS

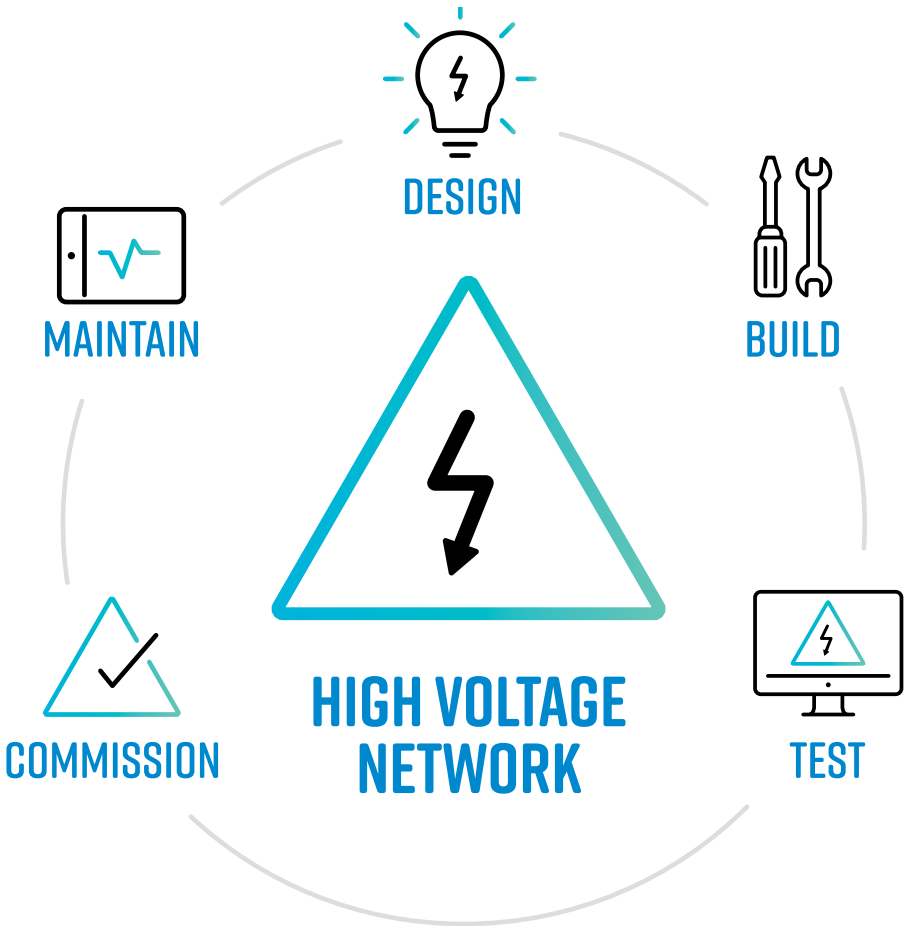
WE WILL BUILD AND MANAGE YOUR NETWORK PROPERLY FROM THE VERY BEGINNING SO THAT IT SERVES YOU WELL NOW AND INTO THE FUTURE.

PRIVATE HIGH
VOLTAGE NETWORKS

BUILDING A PRIVATE HIGH VOLTAGE NETWORK IS ARDUOUS AND TIME-CONSUMING.

You need specialists with deep and diverse experience, each with their own role to play. Protection studies, cable selection, earthing studies, supervisory control and data acquisition (SCADA), relay test instructions, switchgear, transformers and many other items are all drawn together, analysed and tested prior to the voltage even being applied. The experience of your contractor can make or break your project.

At Stowe, we have proven our capability to build reliable networks. We not only consider the installation cost, but the cost over the usable lifecycle of the network to the end user.



CAPABILITIES

OVERHEAD
AND UNDERGROUND FEEDERS

WHETHER IT'S OVERHEAD OR UNDERGROUND, WITH OUR OWN IN-HOUSE EXCAVATION AND LINE CREWS, WE PROJECT MANAGE THE PROCESS FROM START TO FINISH.

OVERHEAD AND UNDERGROUND FEEDERS

Working in the public domain requires a great deal more planning than just reviewing the Dial Before You Dig plans.

Long before soil is turned, our project management team is liaising with councils, utilities, Roads and Maritime Services (RMS) and other stakeholders impacted along the route to ensure that your project runs as smoothly as possible.

We take care of all approvals that are relevant to the works, including road opening licences, road restoration and utility fees, and footpath, council and RMS bonds. We negotiate road and footpath closures with councils and the RMS to minimise disruption to the public and to facilitate the safe and timely installation of your new power feed.

There are times during the planning process though, that regardless of how good your design looks on paper, the RMS or local council may decline the proposed route. In these situations our solution-driven project management team will work with our back-of-house engineering teams to determine a workable solution and negotiate the outcome with the relevant authority.

We have experience across all types of feeder installations including:

- HIGH VOLTAGE AND LOW VOLTAGE CABLES
- ALL TYPES OF OPEN EXCAVATION
- HYDRO EXCAVATIONS
- DIRECTIONAL DRILLING
- CASE BORING
- OVERHEAD POWERLINES
- DIRECT BURIED CABLES
- DUCT BANKS
- STREET LIGHT FEEDS
- OPGW WORKS.

TRACTION
SUBSTATIONS – RAIL

WE CAN DELIVER ACROSS ALL THE ELECTRICAL COMPETENCIES REQUIRED TO BUILD A TRACTION SUBSTATION TO POWER THE NETWORK THAT KEEPS TRAINS RUNNING.

TRACTION SUBSTATIONS – RAIL

Constructing a traction substation requires highly specialised skills and knowledge; it must be built to both rail and Australian standards. Not only do our staff satisfy the rail industry criteria, they are certified as competent in the standards and hold all the relevant electrical and high voltage qualifications.

Our experience includes:

- INSTALLATION, TERMINATIONS AND TESTING OF 33/66KV FEEDER CABLING
- AIR BREAK SWITCHES
- RECTIFIER TRANSFORMERS
- DIRECT CURRENT CIRCUIT BREAKERS
- EARTH FAULT AND PROTECTION EQUIPMENT
- FIRE AND SECURITY SYSTEMS
- COMMUNICATIONS
- SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) AND CONTROL EQUIPMENT
- AUXILIARY TRANSFORMERS
- BATTERY SYSTEMS.

PRIVATE
SWITCHYARDS

WE CAN TAKE AWAY THE WORRY THAT COMES WITH OWNING A PRIVATE SWITCHYARD, INCLUDING BOOSTING YOUR CONFIDENCE IN YOUR NETWORK'S RELIABILITY.

PRIVATE SWITCHYARDS

For some companies, having your own private switchyard makes a lot of sense. However, this level of commitment comes with substantially more responsibility.

For example, an Operational and Maintenance Protocol that nominates your qualified high voltage operators and provides their 24-hour contact details must be in place. These people are the point of call for the utility in case of emergency.

In addition, a High Voltage Installation Safety Management Plan (HVISMP) must also be in place on the site, that sets out the safety rules to comply with the relevant codes and guidelines.

You lessen the burden of having your own private switchyard when you establish Stowe Australia as your nominated operator. We offer our clients a 24hr at-call service to ensure that help is just a phone call away.

We can also develop and implement your HVISMP to ensure that your network is reliable and maintains its compliance.

WE OFFER OUR CLIENTS A 24HR AT-CALL SERVICE TO ENSURE THAT HELP IS JUST A PHONE CALL AWAY.

HIGH VOLTAGE CONSTRUCTION WORKS

Project	Value	Client
Bringelly Road 132kV Upgrade	810	BMD
Bringelly Road Stage 2 Upgrade	1.5M	BMD
Samantha Riley Drive Overhead / Underground	1.6M	Hills Council
The Ribbon Darling Harbour	2.2M	Grocon
Barangaroo 33kV Stage 1A	10.0M	Lend Lease
Western Sydney Stadium	1.2M	Lend Lease
Crown Resort Hotel Sydney	4.4M	Lend Lease
The Papermill	790	MN Builders
Macquarie Telecom (Multiple HV Service Works)	1.0M	MacTel
Blacktown Hospital Feeder Works	830	Laing O'Rourke
Greenhills Parklands	925	Burton Contractors
Westmead CASB Enabling	750	Multiplex
Sydney Freight Terminal	2.1M	Ford Civil
Darling Harbour High Voltage	6.3M	Lend Lease
Pactum Foods Substation	800	Pactum Foods
Next DC Data Centre DRUPS	487	FDC
Epping Town Centre	498	Diona
Gosford Hospital Chamber Substation	1.3M	Lend Lease
Waterside Industrial Sub-Division	900	Stocklands
Endeavour Energy Zone Substation Switchgear	920	Schneider Electric
Bunnings Eastgardens Feeders	550	Pluim Commercial
Fujitsu Data Centre	245	Metrowest
Northpoint Shopping Centre	475	FDC
Richmond Road Marsden Park	1.3M	Burton Contractors
Patricks Port Botany HV Cranes	1.5M	Patricks
HP Data Centre	2.3M	Laing O'Rourke
One Paramatta Square	430	John Holland
Castle Towers Substations	2M	Construction Control
Westmead Hospital Substation	1.9M	Health Infrastructure
MUR Holsworthy Army	2.3M	Laing O'Rourke
Sydney Adventist Hospital	2.3M	Buildcorp
Mooranbah Buffel Park	1.2M	DecMil
OI Glass West Sub	280	OI Glass
Campbelltown Hospital	950	A W Edwards
Norwest Private Hospital Feeders	370	A W Edwards
M2 Upgrade Talavera Road Upgrade	2.3M	Leightons
Westmead Millenium Building	795	Abi Group / Lend Lease
Wet N Wild Sydney	2.0M	Lipman
Endeavour Energy Overhead Works	2.8M	Endeavour Energy

PROJECT LIST

HIGH VOLTAGE CONSTRUCTION WORKS

Project	Value	Client
Penrith iFly Feeders	450	Raybal
P & H Minepro	570	Minepro
Visy Paper 33kV Upgrade	220	Visy Paper
Sydney Airport Corporation Switchgear Upgrade	500	Fulton Hogan
Glenwood Substation	470	Anglican Schools Corporation
Digital Realty Data Centre	1.9M	FDC
Sydney Airport Corporation TLER	200	SACL
Rose Bay Marina HV Upgrade	385	Addenbrook
ASX Data Centre - HV Operations	275	FDC
Liverpool Hospital HV Feeders	2.5M	Bovis Lend Lease
Equinex Data Centre	780	One Build

PROJECT LIST

STOWE
AUSTRALIA
SINCE 1910

SYDNEY CORPORATE HEAD OFFICE
10-12 Clyde Street, Rydalmere NSW 2116
PO Box 6265, Silverwater NSW 1811
T 02 9848 2111 **F** 02 9898 0322

SYDNEY CBD
6 Cunningham Street, Sydney NSW 2000
T 02 8116 0222 **F** 02 9282 9938

SYDNEY GREATER WEST AND CUMBERLAND REGIONS
Unit 1/57 Jack Williams Drive, Penrith
NSW 2750, PO Box 1205, Penrith NSW 2751
T 02 4720 2222 **F** 02 4721 0740

QLD HEAD OFFICE
23 Hi-Tech Court
Eight Mile Plains QLD 4113
PO Box 4025, Eight Mile Plains QLD 4113
T 07 3423 6777 **F** 07 3423 6799

QLD GOLD COAST
12/15 John Duncan Court, Varsity Lakes
QLD 4227, PO Box 2148 Burleigh B.C.
T 07 5522 1066 **F** 07 5522 0355

NORTHERN NSW TAREE
12 Elizabeth Street, Taree NSW 2430
PO Box 751, Taree, NSW 2430
T 02 6552 6411 **F** 02 6552 2631

NORTHERN NSW PORT MACQUARIE
10 Janola Court, Port Macquarie NSW 2444
T 02 6516 5777

VICTORIA MELBOURNE
67-69 Buckhurst Street
South Melbourne VIC 3205
T 03 9695 2333 **F** 03 9695 2399

TASMANIA HOBART
47 Federal Street, Hobart TAS 7002
T 03 6108 1666

HUNTER AND CENTRAL COAST REGION
8 Stenhouse Drive, Cameron Park
NSW 2285
PO Box 285, Wallsend NSW 2287
T 02 4923 0000 **F** 02 4962 3400

ACT CANBERRA
7 Darling Street, Mitchell ACT 2911
T 02 6126 2999 **F** 02 6239 1811

SOUTHERN NSW WOLLONGONG
Unit 5 103-107 Auburn Street
Wollongong NSW 2500
T 02 4298 2555 **F** 02 4227 2737

SOUTHERN NSW NOWRA
14/14 Flinders Street, Nowra NSW 2541
PO Box 829, Nowra NSW 2541
T 02 4480 6666 **F** 02 4422 8633

LET'S GET CONNECTED.